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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/537,888	03/28/2000	Paul Proost	[illegible]	[illegible]

[illegible]

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/537,858	PROOST ET AL.	
	Examiner	Art Unit	
	Jessica H. Roark	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24-30 (as renumbered)* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *24-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 March 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s).

4) ☐ Other

RESPONSE TO APPLICANT'S AMENDMENT

1. The request filed on 1/21/03 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/537,858 is acceptable and a CPA has been established. An action on the CPA follows.

2. The numbering of claims is not accordance with 37 CFR 1.126. The original numbering of the claims must be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When claims are added, except when presented in accordance with 37 CFR 1.121(b), they must be renumbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered newly added claims 26-32 have been renumbered 24-30.

The direction to cancel claims "15-25" in the Amendment filed 1/21/03 has been interpreted to refer to all claims pending prior to entry of the amendment filed 1/21/03, i.e., claims 15-23

3. Applicant's amendment, filed 1/21/03 (Paper No. 22), is acknowledged.
Claims 15-23 have been cancelled. Claims 1-14 have been cancelled previously.
Claims 24-30 (as renumbered) have been added.
Claims 24-30 are pending and under consideration in the instant application.

It is noted that Applicant's request to amend line 6 of page 7 (Figure 1 description) HAS NOT BEEN ENTERED as the request does not comply with 37 CFR 1.121(b).

Drawings

4. Formal drawings have been submitted which fail to comply with 37 CFR 1.84.
It is noted that required drawing changes are no longer being held in abeyance by the Office.
Please see the form PTO-948 previously provided as part of Paper No. 11.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. *The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.*

Timing of Corrections

ABANDONMENT

Sequence Compliance

5. Sequence compliance: Applicant's provision of a corrected CRF, Sequence Listing, and Statement that the contents are identical on 1/21/03, is acknowledged. The CRF has been found acceptable and entered.

Priority

6. Receipt is again acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Application 97116863.8 filed in Europe on 9/29/97; application 97122471.2 filed in Europe on 12/19/97; and application 98104216.1 filed in Europe on 3/10/98 each appear to provide adequate written support for a truncated form of RANTES lacking residues 1 and 2 (that is, "RANTES (3-68)") and a mature RANTES protein comprising 68 amino acids ("RANTES (1-68)").

In addition, each of the priority documents appears to provide adequate written support for a RANTES protein missing "up to 5" amino terminal amino acids.

As noted below, given the ambiguity in the instant claim language with respect to SEQ ID NO:2, the effective filing date of the instant claims is unclear.

Nevertheless, the interpretation of the instant claim language consistent with the disclosure does appear to have adequate written support in Applicant's priority documents.

Thus the effective filing date of the instant claims, interpreted as set forth below, is considered to be September 29, 1997.

7. This Office Action will be in response to applicant's arguments, filed 1/21/03 (Paper No. 22). The rejections of record can be found in the previous Office Action (Paper No. 16).

It is noted that New Grounds of Rejection are set forth herein.

8. Applicant's cancellation of claims 15-23 has obviated the previous objections and rejections with respect to these claims.

Claim Rejections - 35 USC § 112 second paragraph

9. The following is a quotation of the second paragraph of 35 U.S.C. 112.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention

10. Claims 24-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 24-30 are indefinite in that they reference an amino acid sequence with 68 amino acids (e.g., claim 1 recites "residues 2-68 of a RANTES polypeptide according to SEQ ID NO:2"); however, SEQ ID NO:2 is only 66 amino acids in length.

For examination purposes, SEQ ID NO:2 will be interpreted as referring to a mature RANTES polypeptide as set forth in Figure 1, i.e., a polypeptide consisting of the sequence:

NH_2 - SPYSSDT TPCCFAYIAR PLPRAHIKEY FYTSGKCSNP AVVFVTRKNR QVCANPEKKW VREYINSLEM S -COOH

It is suggested that Applicant provide a sequence corresponding to the mature sequence of RANTES (as supported by Figure 1, where the mature polypeptide is identified as residues 1-68) as part of a newly submitted sequence listing.

Applicant is reminded that any amendment must point to a basis in the specification so as not to add new matter. See MPEP 714.02 and 2163.06.

35 U.S.C. §§ 102 and 103

11. The following rejections under 35 U.S.C. §§ 102 and 103 are made under the assumption that the effective filing date for the instantly claimed invention is September 29, 1997.

Claim Rejections – 35 U.S.C. §§ 102 and 103

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another

13. In view of the effective filing date if the instant claims, Oravecz et al (J. Exp. Med. 1997;186:1865-1872, IDS AT) no longer appears to be available as a reference under 35 USC 102(a).

14. In view of the instant claim language which excludes truncation of the N-terminus beyond those residues identified, neither Gong et al. (J. Biol. Chem. 1996;271:10521-10527, IDS AO) nor Rollins et al. (US Pat. No. 5,739,103, of record) appear to anticipate the instant claims.

15. Claims 25 and 28 (as renumbered) are rejected under 35 U.S.C. 102(b) as being anticipated by Noso et al. (J. Immunol. 1996;156:1946-1953, of record, see entire document).

Applicant's arguments, filed 1/21/03, have been fully considered but have not been found convincing.

Applicant again argues that Noso et al. do not teach that the truncated RANTES has chemokine antagonistic activity. Applicant points to the teachings of Noso et al. on page 1950, 2nd column, that the loss of two N-terminal residues, serine and proline, does not affect Eo-chemotactic activity of RANTES.

As previously noted, Noso et al. teach an amino-terminally truncated RANTES consisting of 66 amino acids and derived from dermal fibroblasts (see entire document; e.g. page 1948 2nd column, especially 5th paragraph, and Figure 3). The amino acid sequence of SEQ ID NO:2 (as defined supra) from residue 3-68 would be an inherent property of the RANTES taught by Noso et al. since Figure 3 indicates that it is the amino acids corresponding to positions 1 and 2 that are missing from the 68 amino acid from of RANTES. In addition, Noso et al. teach glycosylated species of this truncated form of RANTES (e.g. page 1948, 2nd column, especially 5th paragraph).

Applicant's comments regarding the lack of demonstrated antagonistic activity for the polypeptide of Noso et al. are acknowledged. However, the fact that RANTES lacking N-terminal amino acids Ser and Pro still was chemotactic in a particular assay does not necessarily indicate that the polypeptide lacks chemokine antagonistic activity in other assays.

Further, the structure of the polypeptide isolated by Noso et al. and the instant RANTES polypeptide consisting of residues 3-68 (as defined supra) appear to be identical. *Identical polypeptides must necessarily possess the same function.* "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In the instant case Noso et al. appear to teach the identical chemical structure.

16. Claims 24 and 29 (as renumbered) are rejected under 35 U.S.C. 102(e) as being anticipated by Offord et al. (U.S. Pat. No. 6,168,784, see entire document).

Offord et al. teach and claim a compound comprising a RANTES polypeptide as set forth in SEQ ID NO:2 of Offord et al. (see e.g., claim 1, SEQ ID NO:2 and columns 1-2). SEQ ID NO:2 of Offord et al. is a mature RANTES polypeptide of 67 amino acids lacking the Ser found at position 1 of the mature polypeptide.

Thus SEQ ID NO:2 of Offord et al. is an isolated amino-terminally truncated RANTES polypeptide comprising residues 2-68 of a RANTES polypeptide according to SEQ ID NO:2 (as defined supra in the rejection under 35 USC 112 second paragraph), wherein the truncated RANTES lacks NH2-terminal amino acid residue 1.

Offord et al. also teach that the polypeptide has chemokine antagonistic activities (see e.g., Abstract and columns 7-8).

Offord et al. teach pharmaceutical compositions comprising the RANTES 2-68 polypeptide and a pharmaceutically acceptable carrier (see e.g., columns 8-11).

Applicant is reminded that no more of the reference is required than that it sets forth the substance of the invention. The claimed functional limitations would be inherent properties of the RANTES 2-68 polypeptide taught by Offord et al.

The reference teachings thus anticipate the instant claimed invention.

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made*

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim [illegible] made in order for the examiner to

18. Claims 24-30 (as renumbered) are rejected under 35 U.S.C. 103(a) as being unpatentable over Gong et al. (J. Biol. Chem. 1996;271:10521-10527, IDS AO).

Applicant's arguments, filed 1 21 03, have been fully considered but have not been found convincing.

Applicant argues that Gong et al. provide no reasonable expectation that the instantly claimed truncations would function as chemokine antagonists. Applicant argues that Gong et al. show that the truncation which removed fewer amino acids (i.e. a RANTES 6-68 polypeptide) produced the least displacement compared to the other truncations (e.g., RANTES 9-68). Applicant concludes that based on the teachings of Gong et al. that truncation of 5 amino acids from the amino terminus (i.e., RANTES 6-68) are less effective at displacement than the truncations of more amino acids, the ordinary artisan would not have been motivated to produce truncations involving only amino acid residue 1, 1-2, 1-3 or 1-4.

The claims are drawn to amino-terminally truncated RANTES 2-68, 3-68, 4-68 and 5-68, lacking amino-terminal amino acid residues 1, 1-2, 1-3, or 1-4 of a mature RANTES polypeptide (SEQ ID NO:2 as defined supra), respectively, and having antagonistic activity; and pharmaceutical compositions thereof.

Gong et al. have been discussed previously and teach amino terminal truncations of RANTES that have chemokine antagonistic activity (see entire document, especially Figure 1).

The Examiner has previously noted that Gong et al. also teach that the functional activity of RANTES is encoded in amino acids 1-5, since various truncations which included amino acids 1-5 resulted in forms of RANTES that lacked functional activity (e.g., page 10523, "Functional Activity of Shortened Analogs"). In addition, Gong et al. teach that truncations of RANTES involving amino acid residues 1-7, 1-8, 1-9 and 1-10 results in binding by these truncated forms of RANTES to receptors *not normally bound by full length RANTES* (e.g., page bridging paragraph of pages 10524 and 10525), causing Gong et al. to conclude that the *specificity* of RANTES lay within residues 1-6 (e.g., page 10525 last paragraph). Figure 6 shows that the truncation that removed the least of the amino terminus (i.e., RANTES 6-68) was *a more specific antagonist* of RANTES than the other more extensive truncations removing amino acids 1-6, 1-7, 1-8, or 1-9 of RANTES. RANTES 6-68 still displaced binding of full length RANTES, albeit less well than RANTES 7-68, RANTES 8-68, RANTES 9-68, RANTES 10-68, or full length RANTES.

Gong et al. teach screening of the various truncation in several assays which permit determination of whether a truncated form of RANTES is an antagonist, and how efficiently that particular truncation functions as an antagonist relative to other RANTES truncations (see entire document, especially the assays discussed in the Results section). Finally, Gong et al. teach that chemokine antagonists can be used to block the infiltration of cells during inflammation (e.g., see Discussion on page 10526-10527).

Gong et al. differ by not teaching an amino-terminally truncated RANTES in which only amino acid 1, amino acids 1-2, amino acids 1-3, or amino acids 1-4 are truncated from the amino terminus of RANTES (i.e., RANTES 2-68, RANTES 3-68, RANTES 4-68, or RANTES 5-68), and by not explicitly teaching a pharmaceutical composition comprising the amino-terminally truncated RANTES.

While the teachings of Gong et al. would not motivate the ordinary artisan interested in identifying *multi-specific* chemokine antagonists to delete fewer than 6 amino acids; the arguments of record were not based upon the selection of multi-specific antagonists. Rather, the ordinary artisan armed with the teachings of Gong et al. would have also recognized that the design of *specific* antagonists of the chemokine RANTES would require deletions that focused upon amino acids 1-6 because these are the

While Applicant's comments that RANTES 6-68 was less effective at displacement of full length RANTES than e.g., RANTES 9-68 are acknowledged; it is also noted that full length RANTES is the most effective specific competitor of full length RANTES (Figure 6A).

Thus the work of Gong et al. provides the ordinary artisan at the time the invention was made with a reasonable expectation that truncations of RANTES that removed fewer than 5 amino acids would still compete with full length RANTES for binding, and would do so without competing with other chemokines for binding. In addition, the teachings of Gong et al. that RANTES function required one or more amino acid residues within residues 1-5 would have motivated the ordinary artisan to screen truncations that removed 1, 1-2, 1-3, 1-4 and 1-5 amino terminal amino acids in order to produce a truncated RANTES polypeptide that did not function to induce chemotaxis or calcium flux, yet competed well for binding to the receptor compared to full length RANTES (i.e., was an antagonist of RANTES). The ordinary artisan at the time the invention was made would have been motivated to focus on shorter, rather than more extensive truncations in order to retain specificity, so that RANTES could be inhibited without inhibiting other chemokines such as MCP-1.

Therefore, the ordinary artisan at the time the invention was made would have been motivated to provide additional truncations of RANTES by focusing on residues 1-6 of the amino terminal in order to identify truncated forms of RANTES *that were antagonistic for RANTES, but that did not cross inhibit interactions of other chemokines with their receptors*. Given the teachings of Gong et al. that functional activity requires residues 1-5, the ordinary artisan would have been further motivated to produce and screen truncations of RANTES lacking amino terminal residues 1, 1-2, 1-3, and 1-4. In addition, given the teachings of Gong et al. that multiple amino terminal truncations of RANTES result in forms of RANTES having chemokine antagonistic activity and the teachings of assays for assessing antagonistic activity; the ordinary artisan at the time the invention was made would have had a reasonable expectation of success in producing the instantly claimed truncations, as a matter of routine optimization.

Further, the ordinary artisan would have been motivated to provide pharmaceutical compositions comprising any such antagonists in order to evaluate their relative efficacy in various disease models of inflammation, as taught by Gong et al.; and would have had a reasonable expectation of successfully utilizing these RANTES antagonistic pharmaceutical compositions in inhibiting at least some models of inflammation. Finally, glycosylated forms of the amino-terminally truncated RANTES antagonistic proteins would be produced as a consequence of many different expression systems that the ordinary artisan would utilize in order to produce sufficient quantities of the truncated RANTES.

Therefore, the invention as a whole was prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

The rejection is maintained as it applies to the instant claims.

19. Claims 24-30 (as renumbered) are rejected under 35 U.S.C. 103(a) as being unpatentable over Rollins et al. (U.S. Pat. No. 5,739,103, of record) in view of Proudfoot et al (J. Biol. Chem. 1996: 271:2599-2603, IDS #AC).

The claims are drawn to amino-terminally truncated RANTES 2-68, 3-68, 4-68 and 5-68, lacking amino terminal amino acid residues 1, 1-2, 1-3, or 1-4 of a mature RANTES polypeptide (SEQ ID NO:2 as defined supra), respectively, and having antagonistic activity; and pharmaceutical compositions thereof.

Rollins et al. teach and claim amino-terminally truncated chemokines having antagonistic activity, including RANTES; and methods comprising administering amino-terminally truncated chemokines including RANTES, for inhibition of chemotaxis of various cellular populations in various diseases (see entire document, especially column 1 at lines 59-62, column 3, columns 6-8, and the claims).

The amino-terminally truncated RANTES taught by Rollins et al. include truncations that are "about 1 to about 10 or about 2 to about 7" of the endogenous chemokine sequence (see e.g., column 3, especially lines 18-34, and claims).

Rollins et al. teach assays for identifying truncations of chemokines that are antagonistic by exemplifying identification of MCP-1 antagonists (see e.g., columns 9-11).

In addition, Rollins et al. teach recombinant production of amino-terminally truncated chemokines in eukaryotic cells, which would inherently result in a glycosylated protein (e.g., column 8, especially lines 11-20). Finally, Rollins et al. teach the formulation of the amino-terminally truncated RANTES in a pharmaceutically acceptable carrier for administration to a patient for treatment of a RANTES-mediated disease (e.g. columns 6-7).

Rollins et al. do not explicitly teach truncations of RANTES that are RANTES 2-68, RANTES 3-68, RANTES 4-68 or RANTES 5-68.

However, these species are encompassed by the small genus of truncations which are explicitly taught and claimed by Rollins et al. (i.e., truncations involving about 1 to about 10 amino terminal amino acids).

Further Proudfoot et al. teach recombinant expression of RANTES, and also teach that the integrity of the amino terminus of RANTES is crucial to receptor binding and cellular activation (see entire document, especially Experimental Procedures on pages 2599-2560 and the Discussion on page 2602).

Like Rollins et al., Proudfoot et al. teach that antagonists of RANTES function are made by modifying the amino terminus of RANTES (see entire document, e.g., Discussion on page 2602). Proudfoot et al. also provide detailed guidance regarding the uses of antagonists of RANTES in inhibition of chronic inflammatory diseases (see e.g., Abstract and Introduction on page 2599).

Thus Rollins et al. provide a general teaching with respect to the production of chemokine antagonists via truncation of amino acids at the amino terminus of any of several chemokines, and Proudfoot et al. establish that modification of the amino terminus of RANTES results in antagonistic properties.

Rollins et al. provide clear guidance to delete amino acids from position 1 to position 10 of the amino terminus. The ordinary artisan would have produced the instantly recited truncations as part of the routine optimization and screening of the small genus of truncations taught by Rollins et al.

Both Rollins et al. and Proudfoot et al. teach production of RANTES antagonists by modifying the amino [illegible] Both Rollins et al. and Proudfoot et al. teach that RANTES antagonists can be used to inhibit

Rollins et al. teach a small genus of amino terminal truncations of chemokines including RANTES, but does not reduce to practice or explicitly list the members of this genus.

The ordinary artisan at the time the invention was made would have been motivated in view of the teachings of Rollins et al. alone, but particularly when combined with the teachings of Proudfoot et al., to make the members of the small genus of amino terminal truncations of RANTES et al. taught by Rollins et al. The ordinary artisan at the time the invention was made would have been motivated to make the instantly recited truncations and formulate them in pharmaceutically acceptable carriers in order to compare the relative potency of each member of the small genus taught by Rollins et al. as antagonists in models of inflammation; and thereby identify the most potent antagonist.

Given the teachings by both Rollins et al. and Proudfoot et al. that modifications of the amino terminus of RANTES resulted in an antagonist, the ordinary artisan at the time the invention was made would have had a reasonable expectation that most, if not all, members of the genus taught by Rollins et al. would function as antagonists. Further, given the guidance provided by both Rollins et al. and Proudfoot et al. as to how to make and screen for RANTES antagonists in multiple expression systems; the ordinary artisan at the time the invention was made would have had a reasonable expectation of making the instantly claimed truncations in either glycosylated or unglycosylated form. Thus the ordinary artisan at the time the invention was made would have found it obvious to make the RANTES 2-68, RANTES 3-68, RANTES 4-68 or RANTES 5-68 truncations recited in the instant claims.

Therefore, the invention as a whole was prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

20. No claim is allowed.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica Roark, whose telephone number is (703) 605-1209. The examiner can normally be reached Monday to Friday from 8:00 to 4:30. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached at (703) 308-3973. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1600 receptionist whose telephone number is (703) 308-0196.

Papers related to this application may be submitted to Technology Center 1600 by facsimile transmission. Papers should be faxed to Technology Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center telephone number is (703) 305-3014.

Jessica Roark, Ph.D.

3/27/03